the charity cloud
cloud computing for charities

The benefits of Cloud Computing

by

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The boom in Cloud computing over the past few years has led to a situation that is common to many innovations and new technologies: many have heard of it, but far fewer actually understand what it is and, more importantly, how it can benefit them.

In an attempt to gain a competitive edge and have access to enterprise grade infrastructure and applications, organisations are increasingly looking for new and innovative ways to cut costs while maximising value – especially now with the current funding cuts. They recognise that they need to grow, but are simultaneously under pressure to save money required for the causes and clients they support. This has forced the realisation that new ideas and methods may produce better results than the tried and tested formulas of yesteryear. It is this growing acceptance of innovative technologies that has seen Cloud computing become the biggest buzzword in IT.
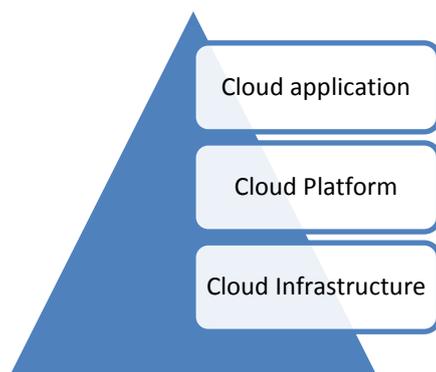
What is 'Cloud computing'?

Many people are confused as to exactly what Cloud computing is, especially as the term can be used to mean almost anything. Roughly, it describes highly scalable computing resources provided as an external service via the internet on a pay-as-you-go basis. The Cloud is simply a metaphor for the internet, based on the symbol used to represent the worldwide network in computer network diagrams. Economically, the main appeal of Cloud computing is that customers only use what they need, and only pay for what they actually use.

Resources are available to be accessed from the Cloud at any time, and from any location via the internet. There's no need to worry about how things are being maintained behind the scenes – you simply purchase the IT service you require as you would any other utility. Because of this, Cloud computing has also been called utility computing, or 'IT on demand'. This new, web-based generation of computing utilises remote servers housed in highly secure data centres for data storage and management, so organisations no longer need to purchase and look after their IT solutions in-house.

What does it comprise?

Cloud computing can be visualised as a pyramid consisting of three sections:

Cloud Application
This is the apex of the Cloud pyramid, where applications are run and interacted with via a web browser, hosted desktop or remote client. A hallmark of commercial Cloud computing applications is that users never need to purchase expensive software licenses themselves. Instead, the cost is incorporated into the

subscription fee. A Cloud application eliminates the need to install and run the application on the customer's own computer, thus removing the burden of software maintenance, on-going operation and support.

Cloud Platform

The middle layer of the Cloud pyramid is the provision of a computing platform or framework as a service. A Cloud computing platform dynamically provisions, configures, reconfigures and de-provisions servers as needed to cope with increases or decreases in demand.

Cloud Infrastructure

The foundation of the Cloud pyramid is the delivery of IT infrastructure through virtualisation. Virtualisation allows the splitting of a single physical piece of hardware into independent, self-governed environments, which can be scaled in terms of CPU, RAM, Disk and other elements.

Types of Cloud Computing

Public Cloud

Public Cloud (also referred to as 'external' Cloud) describes the conventional meaning of Cloud computing: scalable, dynamically provisioned, often virtualised resources available over the internet from an off-site third-party provider, which divides up resources and bills its customers on a 'utility' basis.

Private Cloud

Private Cloud (also referred to as 'corporate' or 'internal' Cloud) is a term used to denote a proprietary computing architecture providing hosted services on private networks.

Hybrid Cloud

A hybrid Cloud environment combines resources from both internal and external providers.

What services can be used in the Cloud?

There are numerous services that can be delivered through Cloud computing, taking advantage of the distributed Cloud model. Here are some brief descriptions of a few of the most popular Cloud-based IT solutions:

Hosted Desktops

A hosted desktop looks and behaves like a regular desktop PC, but the software and data customers use are housed in remote, highly secure data centres, rather than on their own machines.

Hosted Email

As more organisations look for a secure, reliable email solution that will not cost the earth, they are increasingly turning to hosted Microsoft Exchange® email plans. Using the world's premier email platform, this service lets organisations both large and small reap the benefits of using MS Exchange® accounts without having to invest in the costly infrastructure themselves.

Hosted Telephony (VoIP)

VoIP (Voice over IP) is a means of carrying phone calls and services across digital internet networks. In terms of basic usage and functionality, VoIP is no different to traditional telephony, and a VoIP-enabled telephone works exactly like a 'normal' one, but it has distinct cost advantages. A hosted VoIP system replaces expensive phone systems, installation, handsets, BT lines and numbers with a simple, cost-efficient alternative that is available to use on a monthly subscription basis.

Cloud Storage

Cloud storage is growing in popularity due to the benefits it provides, such as simple, CapEx-free costs, anywhere access and the removal of the burden of in-house maintenance and management.

Dynamic Servers
Dynamic servers are the next generation of server environment, offering customers access to resources that look and feel exactly like a dedicated server, but that are fully scalable.

Why switch from traditional IT to the Cloud?

There are many reasons why organisations of all sizes and types are adopting this model of IT. It provides a way to increase capacity or add capabilities on the fly without investing in new infrastructure, training new personnel, or licensing new software. Ultimately, it can save organisations a considerable amount of money.

Removal / reduction of capital expenditure
Customers can avoid spending large amounts of capital on purchasing and installing their IT infrastructure or applications by moving to the Cloud model. Capital expenditure on IT reduces available working capital for other critical operations and organisational investments. Cloud computing offers a simple operational expense that is easier to budget for month-by-month, and prevents money being wasted on depreciating assets.

Reduced administration costs
IT solutions can be deployed extremely quickly and managed, maintained, patched and upgraded remotely by your service provider. Technical support is provided round the clock by reputable providers like appiChar (www.appichar.co.uk), reducing the burden on the organisation's employees. This means that they are free to focus on business-critical tasks, and businesses can avoid incurring additional manpower and training costs.

Improved resource utilisation
Removes the issue of over-provisioning of a network with spare capacity, or under-provisioning one where new hardware constantly has to be added to keep up with demand. The Cloud can free up precious time, effort and budgets to concentrate on the real job of exploiting technology to improve the mission of the organisation.

Scalability on demand
Scalability and flexibility are highly valuable advantages offered by Cloud computing, allowing customers to react quickly to changing IT needs, adding or subtracting capacity and users as and when required and responding to real rather than projected requirements.

Quick and easy implementation
Without the need to purchase hardware, software licences or implementation services, an organisation can get its Cloud-computing arrangement off the ground in minutes.

Quality of service
Your selected vendor should offer 24/7 customer support and an immediate response to emergency situations.

Guaranteed uptime, SLAs
Always ask a prospective provider about reliability and guaranteed service levels – ensure your applications and/or services are always online and accessible.

Anywhere Access
Cloud-based IT services let you access your applications and data securely from any location via an internet connection.

Disaster recovery / backup
All data backup and disaster recovery is taken care of as part of the service. Files are stored twice at different remote locations to ensure that there's always a copy available 24 hours a day, 7 days per week.

Should I be concerned about security?

Many organisations considering adopting Cloud computing raise concerns over the security of data being stored and accessed via the internet. What a lot of people don't realise is that good vendors adhere to strict privacy policies and sophisticated security measures, with data encryption being one example of this. Companies can choose to encrypt data before even storing it on a third-party provider's servers. As a result, many Cloud computing vendors offer greater data security and confidentiality than companies that choose to store their data in-house.

What about integration?

In order to make the most of your existing IT provision, the Cloud computing services you decide to subscribe to should be able to integrate easily with your current infrastructure.

Conclusion

The scalability and speed of deployment offered by Cloud computing means you can expand your IT provision instantly to meet increased requirements, and you can also scale it down again whenever you want. Security is typically greatly enhanced, along with resilience, and the flexibility and responsiveness of Cloud-based IT services mean that you can react quickly to a changing organisational environment. Waste (of both time and resources) is reduced, allowing you to effectively do more with less. This provides you with a leaner, more efficient IT model, available on demand.